          identifying a point when the divergence in transaction history occurred using the database and database copy logs, the point represented by a fail over log sequence number (FOLSN), wherein the divergence in transaction history comprises at least one of:

               a condition in which D1 fails for a period of time during which D1' remains operational, and D1 is brought back online; or

               a condition in which D1 has provided data to the database and the data has not been received by D1'; and

               processing the database log records created after the divergence in transaction history to populate from D1 to D1' or from D1' to D1 changes and identified content, the log records having log sequence numbers for use in processing;

with respect to claim 22, the cited art neither discloses nor suggests:

          A system for resynchronization of a database having multiple copies after an occurrence of a divergence in transaction history comprising:

               database log records, the database log records comprising log sequence numbers representative of database operations and transactions;

               a means for identifying a point of the divergence in transaction history, operating on the database log records and log sequence numbers to identify the divergence in transaction history, wherein the divergence in transaction history comprises at least one of:

               a condition in which D1 fails for a period of time during which D1' remains operational, and D1 is brought back online; or

               a condition in which D1 has provided data to the database and the data has not been received by D1'; and

               a means for comparing information about the log records, the means for comparing using page sequence numbers and fail over sequence numbers to determine if changes have been made to the log records after the divergence in transaction history;

with respect to claim 25, the cited art neither discloses nor suggests:

> A method for resynchronizing multiple copies of a database after a
> divergence in transaction history, the database, D1 operating on server
> computer S1, and its copies, D1' operating on server computers S2,
> having database pages, logs, and log records, comprising:
>
> > identifying the divergence in transaction history, the divergence
> represented by a log sequence number (LSN) , wherein the divergence in
> transaction history comprises at least one of:
> >
> > > a condition in which D1 fails for a period of time during which
> > > D1' remains operational, and D1 is brought back online; or
> > >
> > > a condition in which D1 has provided data to the database and
> > > the data has not been received by D1';
> >
> > > on the server computer being recovered, scanning a log file to
> identify a set of pages to be replaced;
> >
> > > replacing those pages on the server computer being recovered
> with their images from a non-recovering server computer;
> >
> > > rolling forward a transaction log from a last checkpoint through a
> failover LSN on any of those pages being replaced on the server
> computer being recovered;
> >
> > > copying the log and log records from the non-recovering server
> computer from the failover LSN to a maximum LSN; and
> >
> > > replaying the copied log records;

and with respect to claim 26, the cited art neither discloses nor suggests:

> A method for resynchronizing multiple copies of a database after a
> divergence in transaction history, the database, D1, and its copies, D1',
> having database pages, logs, and log records, comprising:
>
> > identifying a point when the divergence in transaction history
> occurred using the database and database copy logs, the divergence

represented by a fail over log sequence number (FOLSN) , wherein the

divergence in transaction history comprises at least one of:

      a condition in which D1 fails for a period of time during which

      D1' remains operational, and D1 is brought back online; or

      a condition in which D1 has provided data to the database and

      the data has not been received by D1';

      creating a list of pages having been changed; and

      processing the database log records created after the divergence

in transaction history to populate from D1 to D1' or from D1' to D1

changes and identified content, the log records having log sequence

numbers for use in processing.

                                      Respectfully submitted,

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